

ABSTRACT

An improved structure of a spark plug is provided which consists of a center electrode retained within a metal shell and a ground electrode including a noble metal-made tip and a body joined to the metal shell. The noble metal-made tip is connected to the body through a fused portion that is a weld between the body and the noble metal-made tip and extends toward the center electrode to define a spark gap. Portions of the noble metal-made tip and the fused portion closest to the tip of the center electrode are located within a range defined by a first line extending from the tip of the center electrode in a lateral direction of the center electrode and a second line extending from a portion of the center electrode closest to the ground electrode in a longitudinal direction of the center electrode so that they do not overlap with the tip of the center electrode both in the lateral and longitudinal directions of the center electrode, thereby securing the stability of a sequence of sparks without sacrificing the growth of a flame kernel and avoiding the possibility of sparks occurring between a side wall of the center electrode and the fused portion, which minimizes the wear of the fused portion. This results in improved thermal resistance and durability of the ground electrode, which prolongs the service life of the spark plug.

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